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A

LETTER

TO

Sir THOMAS HYDE PAGE,

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IN

ANSWER TO HIS LETTER

LATELY PUBLISHED

On the Subject of the Eau-Brink Cut.

BY

A MEMBER of the COMMITTEE

Appointed for conducting the Bill through Parliament.

1794.

BRITISH MUSEUM
28 JUN 46

TO

SIR THOMAS HYDE PAGE.

SIR,

A Manuſcript paper, dated October 26, 1793, has been put into my hands, purporting to be a copy of your *preſent* ſentiments on the Eau-Brink Cut, commonly called Kinderley's Cut; and being ſomewhat intereſted therein, I muſt take the liberty to make a few remarks on what you have been pleaſed to ſtate.

You are miſtaken in ſuppoſing, that the late Mr. Smeaton was amongſt thoſe who objected to this meaſure, and have probably been led to the aſſertion, by confounding two things which have not the ſmalleſt relation to each other, for Mr. Smeaton's obſervations had reference to a work below Lynn, or, as he expreſſes it himſelf, "The damming up the old river "at the weſt point, and cutting a new one through the "land down to the road." This, ſo far as Mr. Kinderley had any concern in it, (or ſomething, indeed, like this) was part of an extenſive plan for joining the Wiſbech waters with thoſe of the Ouſe, and diſcharging them as near to deep water as poſſible; but you will

not find it recommended by Mr. Kinderley, either as a work by itſelf, or having any connexion with his plan for improving the outfall of the Ouſe waters, as a buſineſs diſtinct and ſeparate from his grand ſcheme.

At the time when Mr. Smeaton wrote, this Cut below Lynn had been recently recommended by Mr. Elſtobb, in oppoſition to a ſcheme of Mr. Roſewell's for improving the harbour of Lynn; and I do not heſitate to ſay, though in ſtronger terms than Mr. Smeaton, that as a ſeparate and diſtinct buſineſs, the making of this Cut and Dam below Lynn was one of the wildeſt projects that ever was conceived, and therefore juſtly reprobated by Mr. Smeaton; but as forming part of Mr. Kinderley's great ſcheme, was in a high degree neceſſary; for without ſuch a Cut the Wiſbech waters would have acted upon thoſe of the Ouſe, nearly at right angles, and the eddy that muſt have been occaſioned by two ſtreams interfering with each other, in ſo very awkward a direction, would probably have been productive of great miſchief in the harbour of Lynn. I can venture to aſſure you further, that not long before Mr. Smeaton's death, he expreſſed himſelf decidedly in favour of the Eau-Brink Cut.

You ſee, Sir, I am willing to give you credit for having thus far acted from error, and not from deſign; but, Sir, what right have you, as a candid man I mean, to take juſt as much of Mr. Smeaton's opinion, as you erroneouſly ſuppoſe will anſwer your purpoſe, and ſink the reſt in oblivion? You certainly know that Mr. Smeaton will not bear you out in your ideas concerning Denver Sluice; for he has ſaid, in the cleareſt and moſt unequivocal manner, that

Denver

Denver Sluice was beneficial, rather than otherwiſe, to the Ouſe outfall.

Thus the credit you aſſume to the oppoſition ſide of the Eau-Brink buſineſs, by joining the name of Mr. Smeaton to thoſe who have given opinions againſt it, is ſhaken to its very foundation.—Mr. Smeaton, Sir, was above ſpeaking any ſentiments but his own. Of the two others you have mentioned, I know little, but from their printed reports; and having detached Mr. Smeaton's name from theirs, you are extremely welcome to all the credit you can derive from their profeſſional character and abilities.

I proceed to examine what you have been pleaſed to write on the ſubject.—The paper in queſtion, in contradiction to Mr. Smeaton's opinion, charges Denver Sluice with having done a great deal of miſchief; but, Sir, you ought to know, that the outfalls of the Nene, the Witham, and the Welland, all diſcharging themſelves into the ſame arm of the ſea, have been likewiſe loſt, and Denver Sluice having no connexion whatever with thoſe rivers, the hiſtory of cauſes and events operating upon the country you treat of, is to be ſought from other ſources than ſlight and ſuperficial obſervation, or by attending to the Lynn outcry againſt Denver Sluice. But it is not my preſent purpoſe to inveſtigate what I am, however, ready to go into whenever you pleaſe.

You know, Sir, that the river below Denver is already confined to a narrow ſpace as far as Eau-Brink, and whether you know it or not, the fact is, that between thoſe two points, it is navigable at all times of flood. At Eau-Brink, a dam is meant to be made acroſs the old river, to turn the Upland Waters into the New Cut, and thoſe waters will be confined at the upper end of the New Cut, to the ſame width as the preſent river now is above it; and widening gradually

will be brought, in a confined ſtate, almoſt ſix miles nearer to deep water than at preſent, deſerting that rambling, wide, awkward bay, above the town of Lynn, which not only renders navigation at all times dangerous, expenſive and tedious, and often impracticable, but (upon the authority of Mr. Smeaton's report,) " annoys the veſſels laying in the harbour of " Lynn," and contributes " to drive thoſe veſſels " from their moorings."

The river, I ſay, is to be brought in a confined ſtate almoſt ſix miles nearer to deep water than at preſent, and ſurely no words of mine are required to prove, that the confinement of the river and the ſhortening of its paſſage is a great *deſideratum*; but leſt I ſhould fail in argument, I will bring an authority which I am ſure you will not diſpute, and that is the authority of Sir Thomas Hyde Page himſelf, who, in a former publication, ſays, * " A " few miles above the town the river is very wide, " in ſome places it is more than half a mile acroſs, " *where* THE WATER IS SHALLOW, *there being bars of* " *ſand formed that hold it back upon the country*, which " are occaſioned by the TOO GREAT WIDTH OF THE " RIVER, *as the neceſſary velocity of the ſtream to pre-* " *ſerve its proper depth is thereby loſt.*" † In another publication, ſpeaking of Kinderley's Cut, which you there ſay ought to begin at St. Peter's, inſtead of Eau-Brink, you ſay, " There is the ſame fall by this New " Cut, as by the river; the advantage of it is, that it " would have that fall in a ſhorter diſtance of four

* Page 8 of a pamphlet, intituled, " Obſervations upon the Drainings of the South and Middle Levels of the Fens." Printed for T. Evans, near York Buildings, in the Strand, 1777.

† Page 7 of a pamphlet, intitled, " Obſervations on the preſent State of the South Levels of the Fens, with the propoſed Method for the better Drainage of that Country." Printed in 1775.

" miles, *which would* UNDOUBTEDLY *be of ſer-*
" *vice for the quicker diſcharge of the water.*"

Thoſe facts and that principle being admitted, which the advocates for Kinderley's Cut have contended for, what is it then that is objected to by Sir Thomas Page? It is the mode of confining the river, and nothing elſe; and we now come, Sir, to conſider your arguments againſt what Mr. Kinderley recommended, and has been ſince approved (as I have ſhewn) by Mr. Smeaton, and (as you have ſtated) by Meſſieurs Golborne, Watté, Mylne, Hudſon, and Rennie, to whoſe names you might have added others of long local experience, and probably of as much engineering ſkill and reſpectability, as are poſſeſſed by thoſe two others whoſe names you have quoted on the oppoſite ſide.

Againſt Mr. Kinderley's plan of confining the river, you ſay, in the paper before me, " that the run of " water from the ſea into the New Cut, would carry " great quantities of ſilt, &c. (what does this, &c. " comprehend?) which might be dropped higher " up the river, and as the ebb is ſo much ſlower " than the flood, it probably would not have ſufficient " force to carry it out to ſea." Now, Sir, facts ought to be eſtabliſhed before arguments are held upon them; and give me leave to aſk you, what it is that will occaſion the water from the ſea to run into the New Cut with great violence? It was an old and approved maxim, even to a proverb, amongſt the ancients, * " *that deep waters, in a confined courſe,*

* Quintus Curtius, lib. 7. cap. 4. Cato de Moribus, lib. 4. diſtich 31. Eraſmus has a paſſage to the ſame effect; and the Engliſh reader will find the ſame ſentiment in page 12 of the Man of the World, viz. " Smooth water you know runs deepeſt."

" *always run the* STILLEST ;" and, Sir, there is to be no dam acroſs the bottom of that part of the river which will be deſerted, and conſequently the tide will flow partly into and through the New Cut, and partly into the preſent bay, above Lynn, as far as the dam at the upper end of that part of the old river, which will be deſerted, until the bay ſilts up, and what will then become ſalt marſh is embanked; a work which muſt be executed at different periods, and cannot entirely take place for many years. Now, bating the proverb, which is againſt you, whence is the violence to ariſe, and the miſchief you apprehend from it? You ſeem to have forgot what you previouſly have admitted, " *that the neceſſary velocity of the ſtream to preſerve a* " *proper depth, has been loſt, by the improper width of the* " *river; and that the ſhort diſtance of the New Cut will* " *undoubtedly be of ſervice for the quicker diſcharge of the* " *waters*;" which laſt cannot happen, without the acceleration of that ebb which you complain of. In truth, the velocity will be ſo encreaſed; that the bottom of the river, by the action and re-action of the waters paſſing through it, will be deep, inſtead of ſhallow; and being confined, as well as deep, the current, though briſk, will be perfectly harmleſs to the ſides, for the reaſon ſtated in the old proverb; and you know, Sir, there are ſuch things as ſpade machines, which are uſed in confined rivers, for the purpoſe of looſening all ſilt, and cauſing it to be carried away even by languid ebbs, as faſt as it ſubſides.

Speaking further of Mr. Kinderley's mode of confining the river, you ſay in your former publication, but have dropped this part of the buſineſs entirely in the

the paper now before me. "* It is not eaſy for any "one to aſſert poſitively that this work will anſwer: "the corporation (of Bedford Level) are led to hope "that it will, becauſe a ſimilar thing has been done at "Wiſbech, AND FOUND BENEFICIAL. We may infer "from it, that provided the Cut at Lynn can be made "to bear the ſame proportion to the Ouſe as the "other does to the Wiſbech river, that it may in ſuch "caſe anſwer as well. The New Cut at Wiſbech is "pretty near the ſame dimenſions, that is, the chan-"nel of the old river; it therefore was only giving the "water a new direction equal to what it had quitted, "and it was reaſonable that it ſhould anſwer." Here, Sir, I will join iſſue with you, and having ſhewn that you have agreed to the neceſſity of confining the river, I will endeavour to convince you from facts, which are ſtubborn things, and in which you are very deficient, that you have approved in the cleareſt and moſt unequivocal manner, Mr. Kinderley's plan of confinement, which you now object to.

The New Cut at Wiſbech is of the ſame dimenſions with the channel of the old river there, *as far as it was confined*,; but the Cut diſcharged itſelf into a bay of ſhifting ſands, AND SO DID THE OLD RIVER; which bay was and continued to be ſix furlongs wide. The New Cut at Lynn is meant to be, as I ſaid before, of the ſame dimenſions at its commencement with the river Ouſe, *ſo far as it is confined*; and widening gradually, it will fall into the bay or harbour of Lynn, where, according to your own account, it is 300 yards wide. Now, Sir, from your own reaſoning, can it be ſuppoſed, that a confined body of water, comparatively

* Page 11, of the Obſervations, &c. printed in 1777.

ſmall,

ſmall, both as to weight and velocity, and brought only one mile and a quarter nearer to deep water, can have been more efficacious in keeping open a channel through ſhifting ſands of 1320 yards width at the commencement, and getting infinitely wider as you approach to deep water, than the Ouſe when confined almoſt ſix miles nearer to deep water will be in keeping open a channel through the bay or harbour of Lynn, which you ſay is only 300, and is actually only 285, yards wide? It is unneceſſary, I preſume, to ſay another word upon this part of the ſubject, and more eſpecially as the teſt of near twenty years experience, ſince you wrote what I have above quoted, has proved to a demonſtration, that the mode of confinement at Wiſbech was founded on that ſort of principle which has inſured ſucceſs. And now, Sir, give me leave to enumerate the advantages which have attended this New Cut. The North Level of the fens, which one who wrote againſt the Cut (Badeſlade) pronounced, would be ſo far from being relieved by this Cut, that it would thereby be rendered irrelievable at all, has been thereby brought, together with many thouſands of acres more, into a perfect ſtate of drainage and cultivation. The ſurface of the river, from the New Cut upwards, and through the town of Wiſbech, is below where the bed of the river was before its execution, in conſequence of which veſſels of far heavier burden than uſual are navigated, and the trade of Wiſbech, from that and an extended cultivation, has increaſed almoſt beyond belief. The upland waters have never riſen ſo high in the wide rambling Waſh as they had uſed to do, by four feet, or thereabouts. The banks on each ſide of the Waſh, one whereof was almoſt conſtantly breaking, have been relieved from that prodigious preſſure to which they were before expoſed, from the laſhing

waves,

waves, acted upon by violent winds; and there has never been a breach of bank ſince the work was executed. Near four thouſands acres of land in the Waſh, have been reclaimed from a ſtate of abſolute ruin. Near one hundred thouſand acres of rich and fertile land called South Holland, great part of which has hitherto yielded nothing, are now about to be drained (under an act of parliament already paſſed) into the channel formed by this New Cut, below the mouth of it. And, laſtly, large embankments of newly acquired ſalt marſhes, which before the execution of Kinderley's Cut, were a wide bay, like that above Lynn, have been executed, and theſe marſhes are become rich grazing land.

We will now proceed, Sir, to ſtate what you and Mr. Hodgkinſon have recommended, in oppoſition to Mr. Kinderley's mode.

Your plan is the confinement of the river Ouſe; I cannot ſay in its preſent courſe, for ſtationary courſe it has none, but through the wide bay above Lynn. You ſay in your former publication as follows: "* This "proſpect appears at the firſt view to be impracti- "cable, *as it would be difficult to make banks to ſtand* "*upon ſhifting ſands*; I preſume, however, that it "might be done, by leaving the preſent banks in the "ſtate they are now in, and making others in the in- "ſide of them, which need only to be made of a *ſuffi-* "*cient height* to keep the water in one channel when "the ſea runs out at about half ebb, that being the "time when the water has the greateſt grinding force "outwards. The ſituation ſhews how this might be "done in a ſimple and cheap way, as little more than "faſcines and ſtakes would be wanting; ſuch works

* Page 6, of the Obſervations, printed in 1775.

"are

" are not ſubject to be carried away by the violence " of the rains and water, and the elaſtic quality of the " faſcines would prevent the river from widening " more than would be neceſſary; and as the greater " part of the work would always be under water, it " ſcarcely would admit of decay, wood being only " ſubject to rot from undergoing the changes of wet " and dry."

Behold, at laſt, the great myſtery revealed.—This is a part of that grand and ſtupendous ſcheme, to which ſo many alluſions have been made by the Lynn merchants, and to the pretended procurement of which, their conciliatory propoſitions (as they were pleaſed to call them) were meant to cajole the promoters of Kinderley's Cut; and Sir Thomas Hyde Page has been induced, after a ſilence of near twenty years, to take up his pen with a ſeeming endeavour to perſuade the public, to adopt this ſtrange and unaccountable project.—Can he, or can any man, refer us to a work of the ſame kind that has been ſucceſsfully done in the ſame way in any part of the known world? Will he, or will any man, have the goodneſs to ſtate what advantages have been derived from it? If not, ſurely we are not expected to reſign our faculties of memory and conviction, and bury all that has been done under our noſes, in profound oblivion? I am really afraid to truſt myſelf with comments on this abſurd and moſt impracticable ſcheme, but ſuppoſing it done, and the event to be every thing that could be wiſhed for, what is it that has been accompliſhed? Why a confined channel of upwards of eight miles, inſtead of one of little more than two, *leading the water to the very ſame point*, and according to Sir Thomas Hyde Page's own words, and the invariable doctrine of fluids, you do not acquire that quick diſcharge of water, which might

might be had by taking the ſhorter Cut.—" But, ſays Sir Thomas, this confined channel will have been obtained in that ſort of way, as to admit of the Floods paſſing over it, for ever, into the preſent wide bay above Lynn; and though I made not a point of it before, I now conceive this to be neceſſary, not only to the preſervation of the banks, but to the navigation of ſhips, of the ſame ſize that are now uſed, into the harbour of Lynn." So that according to this doctrine, Sir, it would be ſtill better for the banks, as well as for the navigation, if that bay were as wide again as it is.—Are theſe the ſentiments of a nautical man? Are they the philoſophic reaſonings of a royal engineer, for ſuch you are ſtiled in the paper now before me? Or are they what honeſt indignation reddens at the idea of? The facts you have adduced appear to me ſo perfectly unfounded, and your arguments upon them ſo contrary to what I have always conceived to be the laws of nature, of reaſon, and I might almoſt ſay of common ſenſe, that if they did not come from a man of rank and character, they might have paſſed without an anſwer, as not likely to have much weight of their own. In point of fact, Sir, from whence do you infer that the entrance of the tidal waters into the New Cut, will be in a ſtraight line, inſtead of a curved one? If, Sir, you had taken a view of the plan that has been ſo frequently exhibited, you would not have fallen into this miſtake, for the indraught at the firſt will be in an oblique direction, and therefore, according to your own doctrine, " *will be gradually checked*;" but independent of this, the Cut at Wiſbech, from which ſo much good has ariſen, is perfectly ſtraight.

Now we come to the prepoſterous part of the buſineſs. You are pleaſed to ſay, in the paper now before me " that the currents paſſing from ſide to ſide,

in

" *in a wide expanſe of water*, being alſo gradually " checked, in a velocity that otherwiſe would be dan- " gerous, are certainly governed by *a wiſe law of na- " ture*, and the circuitous courſe is not only beneficial " in moderating the velocity of the currents, but the " projecting banks at all times afford ſhelter, and " prevent the deſtructive effects of high waves, which " a ſtraight line of ſome miles, and current of from " four to ſeven miles *per* hour, or more, in the pro- " poſed Cut, would frequently occaſion, and, in my " opinion, be far more dangerous *to the land owners* " in general than to the navigation." You are unfortunate in your facts, for nature, Sir, never formed that wide expanſe of water, to which you appear to be ſo partial. It is a diſeaſe, occaſioned by the irruption of the ſea, or by ſome great land flood, as you may convince yourſelf by referring to Dugdale, and various other writers, who have told us what was the original width of the river, and how it has encreaſed from time to time, concerning which I could likewiſe adduce other inconteſtible proofs, if neceſſary. This wide expence of water, an alteration in which you ſay would be ſo dangerous to the land owners, has been on their part the ſubject of complaint for centuries paſt, down to the preſent moment, during the whole of which time the drainage and navigation have been getting gradually worſe; and from experience, that unerring guide, I will take the liberty of telling you, Sir, that nothing in the world can poſſibly be ſo deſtructive to banks, as laſhing waves in a wide expanſe of water; and further, that preciſely at thoſe points where there are projections, the greateſt deſtruction invariably happens, by reaſon that thoſe points are ſubject to the greateſt preſſure, from the violence of the wind, when driving the waves againſt them.

Upon

Upon the whole, Sir, according to what has hitherto appeared, there is only one engineer (Mr. Hodgkinſon) in exiſtence (Mr. Nickalls being dead) who has written againſt the Eau-Brink Cut, and he has evidently copied from your plan of faſcines and ſtakes, without attending to the circumſtance of your having agreed to what has, at every period, been inſiſted on by Mr. Kinderley, and thoſe who have eſpouſed his ſide of the queſtion.

The Lynn merchants have uniformly refuſed to commit themſelves fairly to the opinions of engineers indifferently choſen. What is to be inferred from ſuch conduct? Suppoſe, for one moment, that they had the ſame teſt of experience, and an equal number of opinions to juſtify their conduct, that the promoters of the New Cut have to ſanction theirs, in ſuch a caſe would the Lynn merchants withdraw their oppoſition? The anſwer is obvious; and ſurely it is too much to expect, that the country will deſiſt from endeavouring to obtain a good navigation and complete drainage, becauſe vague apprehenſions are brought forward by Sir Thomas Hyde Page, after a lapſe of near twenty years, without having viſited the country, or, from what appears, taken any meaſures to obtain information, as to the effect of what has been done at Wiſbech, to ſay nothing of the caſe of Cheſter, where a work of the ſame kind, alſo recommended by Mr. Kinderley, has been executed with the ſame degree of ſucceſs.

I am, Sir,

Your obedient humble ſervant,

INVESTIGATOR.